Chapter: 15

State(s): Idaho

Recovery Unit Name: Coeur d'Alene Lake Basin

Region 1
U S Fish and Wildlife Service
Portland, Oregon

DISCLAIMER

Recovery plans delineate reasonable actions that are believed necessary to recover and protect listed species. Plans are prepared by the U.S. Fish and Wildlife Service, sometimes with the assistance of recovery teams, contractors, State agencies, Tribal agencies, and others. Objectives will be attained and any necessary funds made available subject to budgetary and other constraints affecting the parties involved, as well as the need to address other priorities. Recovery plans do not necessarily represent the views or official positions or indicate the approval of any individuals or agencies involved in plan formulation, other than the U.S. Fish and Wildlife Service. Recovery plans represent the official position of the U.S. Fish and Wildlife Service *only* after they have been signed by the Director or Regional Director as *approved*. Approved recovery plans are subject to modification as dictated by new findings, changes in species status, and the completion of recovery tasks.

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COEUR D' ALENE LAKE BASIN RECOVERY UNIT CHAPTER OF THE BULL TROUT RECOVERY PLAN

EXECUTIVE SUMMARY

CURRENT SPECIES STATUS

The U.S. Fish and Wildlife Service issued a final rule listing the Columbia River population of bull trout as a threatened species on June 10, 1998 (63 FR 31647). The Coeur d'Alene Lake Basin Recovery Unit (often referred to in this chapter as the Coeur d'Alene Recovery Unit) forms part of the range of the Columbia River population. The Coeur d'Alene Recovery Unit encompasses 1) the Spokane River and its tributaries upstream of Post Falls Dam and 2) Coeur d'Alene Lake and its tributaries. The Coeur d'Alene Recovery Unit Team identified the Coeur d'Alene Lake Basin core area as the only core area within the Coeur d'Alene Recovery Unit. Current knowledge suggests that local populations within the Coeur d'Alene Recovery Unit consist primarily of the migratory form. Therefore, the core area encompasses the entire Coeur d'Alene Lake, the St. Joe and Coeur d'Alene River subbasins, and all associated tributaries as migratory bull trout may utilize all of these areas during some portion of their life history.

HABITAT REQUIREMENTS AND LIMITING FACTORS

The distribution and abundance of bull trout in the Coeur d'Alene Lake basin have been effectively limited by landscape-level changes that degraded physical and chemical habitat quality and resulted in fragmentation of habitat patches and isolation of populations. It is widely accepted that the persistence of the species is linked to the resilience of local populations as well as to the condition, structure, and interaction of populations and habitats at larger scales. Dramatic changes in riparian, wetland, stream, and forest ecosystems have resulted from several suppressing factors that include livestock grazing, dam construction, logging, mining, introduction of and management for exotic species, channelization, urbanization, construction of transportation networks, and irrigation withdrawals. In many instances, habitat degradation and consequent reduction in bull trout populations have resulted from the cumulative effects of

changes to terrestrial and aquatic ecosystems. Over time, these cumulative effects may be the most harmful to bull trout populations because of their potential to alter ecosystem processes that have defined bull trout existence.

RECOVERY GOALS AND OBJECTIVES

The goal of the bull trout recovery plan is to **ensure the long-term persistence of self-sustaining, complex, interacting groups of bull trout distributed throughout the species' native range so that the species can be delisted.** To achieve this goal, the following objectives have been identified for the Coeur d'Alene Recovery Unit:

- Maintain current distribution of bull trout and restore distribution in previously occupied or depressed areas within the Coeur d'Alene Recovery Unit.

- Maintain stable or increasing trends in bull trout abundance.

- Restore and maintain suitable habitat conditions for all bull trout life history stages and strategies.

- Conserve genetic diversity and provide opportunity for genetic exchange.

RECOVERY CRITERIA

Recovery criteria for the Coeur d'Alene Recovery Unit were established to assess whether recovery actions result in the recovery of bull trout in the basin. The criteria developed for bull trout recovery address quantitative measurements of bull trout distribution and population characteristics on a recovery unit basis.

Because little is known about resident life history forms and their contribution to the status of local populations within the Coeur d'Alene Recovery Unit, the recovery criteria in this chapter will address only the migratory forms. As additional research and new knowledge becomes available relating to resident

bull trout and their contribution to each local population, refinement of criteria will be made as dictated by the new information.

1. **Distribution criteria will be met when the total number of stable local populations has been increased to 11 and when these populations occur broadly throughout the core area.**

Within the core area, population levels that represent a recovered status for migratory bull trout have been established for two subbasins. Delineation of subbasins will ensure that recovery of local populations will restore distribution within the Coeur d'Alene Recovery Unit and will improve management efficiency within each subbasin and throughout the Coeur d'Alene Recovery Unit. The subbasins are as follows:

- The St. Joe River subbasin will consist of at least 8 local populations that contribute to a total of an average of 800 annual adult spawners. However, within this subbasin, 5 local populations with an average of 500 annual adult spawners will occur above and/or in Red Ives Creek, and 3 local populations with an average of 300 annual adult spawners will occur from Red Ives Creek downstream to Big Creek.

- The Coeur d'Alene River subbasin, particularly the North Fork Coeur d'Alene River drainage, will consist of at least 3 local populations contributing to an average of 300 annual adult spawners.

2. **Trend criteria will be met when the overall bull trout population in the Coeur d'Alene Recovery Unit is accepted, under contemporary standards of the time, as being stable or increasing, based on at least 10 years of monitoring data.**

3. **Abundance criteria will be met when the core area hosts at least 11 stable local populations (8 in the St. Joe River and 3 in the North Fork**

Coeur d'Alene River), contributing to an average of 1,100 adults spawners per year.

4. **Connectivity criteria will be met when migratory forms are present in all local populations and when intact migratory corridors among all local populations in the core area provide opportunity for genetic exchange and diversity.**

ACTIONS NEEDED

Recovery for bull trout will entail reducing threats to the long-term persistence of local populations and their habitats, ensuring the security of multiple interacting groups of bull trout, and providing habitat conditions and access to conditions that allow for the expression of various life history forms. The seven categories of actions needed are discussed in Chapter 1; tasks specific to this recovery unit are provided in this chapter.

ESTIMATED COST OF RECOVERY

Total cost of bull trout recovery in the Coeur d'Alene Recovery Unit is estimated at $3.9 million spread over a 25-year recovery period. Total costs include estimates of expenditures by local, Tribal, State, and Federal governments and by private business and individuals. Cost estimates are not provided for tasks which are normal agency responsibilities under existing authorities. These costs are attributed to bull trout conservation, but other aquatic species will also benefit.

ESTIMATED DATE OF RECOVERY

Time required to achieve recovery depends on bull trout status, factors affecting bull trout, implementation and effectiveness of recovery tasks, and responses to recovery tasks. A tremendous amount of work will be required to restore impaired habitat, reconnect habitat, and eliminate threats from nonnative species. Three to five bull trout generations (15 to 25 years), or possibly longer,

may be necessary before identified threats to the species can be significantly reduced and bull trout can be considered eligible for delisting.

For the North Fork Coeur d'Alene River drainage, however, two scenarios are possible for achieving recovery. Both must be considered for the estimated date of recovery:

1. Allow for natural recolonization to occur within the North Fork Coeur d'Alene River watershed and implement a controlled propagation program only if all other measures have been ineffective in improving bull trout status in the wild. With this scenario, an extended recovery duration would be expected, even if threats to bull trout and bull trout habitats are significantly reduced through implementing recovery tasks (20 to 25 years), because there are no known local populations to expand within the North Fork Coeur d'Alene River watershed and no source of bull trout within the Coeur d'Alene Recovery Unit large enough to support natural recolonization. As local populations within the St. Joe River subbasin expand 4 to 5 generations out, the opportunities for natural recolonization to occur within the North Fork Coeur d'Alene River drainage may increase. However, natural recolonization is expected to occur very slowly, if at all, in the North Fork Coeur d'Alene River watershed as recent behavioral and genetic studies of bull trout in other portions of their range suggest that the fish exhibit a high degree of fidelity to natal streams. Therefore, recovery may take an additional 4 to 5 generations (20 to 25 years), totaling 8 to 10 generations (40 to 50 years), for this subunit.

2. Accelerate recovery time by initiating a controlled propagation program. This program would only be initiated 1) upon completion of a feasibility study to identify a host of streams having the greatest potential to support local populations and 2) concurrent with reduction of threats to bull trout and bull trout habitats. With this scenario, recovery of bull trout within the

North Fork Coeur d'Alene River may be prolonged by only one or two generations (5 to 10 years) because the feasibility study and development of a controlled propagation program would take approximately five years. Under this scenario, recovery of bull trout for the Coeur d'Alene Recovery Unit is expected to occur within five to seven bull trout generations (25 to 35 years). Because the population of bull trout within the Coeur d'Alene Recovery Unit is seriously imperiled, initiating this program as quickly as possible may also be necessary to establish a genetic refugia. Currently, only one known local population in the St. Joe River may meet the level of 100 annual adult spawners that has been suggested by Rieman and Allendorf (2001) to minimize the risk of inbreeding depression. In addition, because of the risks related to stochastic and deterministic processes, the population of bull trout within the Coeur d'Alene Recovery Unit is a prime candidate for a propagation program.